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DETAILED DESCRIPTION

[Detailed Description of the Invention]**[0001]**

[Field of the Invention] In this invention, it is related with the vacuum cleaner used in an ordinary home.

Therefore, it is related with the attachment for cleaning which is a suction tool for vacuum cleaners which cleans the narrow place of especially an air circulation type vacuum cleaner, etc.

[0002]

[Description of the Prior Art] The conventional vacuum cleaner is explained using drawing 7. As shown in a figure, it has the settling chamber 4 which builds in the electric blower 2 in the cleaner body 1, and builds in the vacuum cleaner bag 3 ahead of the electric blower 2, and has the cord take-up motion 6 which rolls round the power cord 5 to electric blower 2 back, and, ahead [settling chamber 4], the connection tube 7 is allocated. The tubed attachment 8 for cleaning which cleans a narrow place etc. and which uses carrying out an attachment is formed in this connection tube 7, enabling free attachment and detachment. .

[0003] As an arrow shows with the figure, dust is attracted by the electric blower 2 with air from the attachment 8 for cleaning, and the attracted air penetrates the vacuum cleaner bag 3, passes the inside of the electric blower 2, and is emitted to the exterior from the exhaust port 9.

[0004] Thus, although the attachment 8 for cleaning of the non-air circulation type vacuum cleaner is suitable for cleaning of a single air course, the place where the vigor which inhales intermediary cage air is strong, and narrow, etc., what is adapted for it is not provided in development of the attachment 8 for cleaning used with an air circulation type vacuum cleaner.

[0005]

[Problem(s) to be Solved by the Invention] In the above-mentioned conventional composition, if it is going to develop the attachment 8 for cleaning in an air circulation type vacuum cleaner, It is necessary to pass said attachment 8 for cleaning for the separate part which needed to establish the suction passage and the flueway in the attachment 8 for cleaning, and blockaded only the flueway between air circulation type vacuum cleaners. On the other hand, if said attachment 8 for cleaning is used with an air circulation type vacuum cleaner as it is, air will leak between a suction passage and a flueway, and the vigor of the air which a required suction force is lost and is inhaled from the attachment 8 for cleaning will fall.

[0006] Without this invention's solving the above-mentioned conventional technical problem, and using a separate part, an air circulation type vacuum cleaner is suited and it aims at obtaining the user-friendly vacuum cleaner possessing the attachment for cleaning which is a suction tool for vacuum cleaners which can absorb the garbage of a field to be cleaned up easily.

[0007]

[Means for Solving the Problem] To achieve the above objects, a suction passage which this invention is open for free passage to the electric blower's built in main part of vacuum cleaner suction side, and has an opening at the end, While having a flueway which is open for free passage to an exhaust side of said electric blower, respectively and dividing said suction passage and a flueway with a bridgewall, It is the thing provided with an exhaust aperture which makes an exhaust wind discharged from a flueway emit into the atmosphere, and even if it does not use a separate part which blockaded only a flueway, air circulation within a suction tool for vacuum cleaners is not performed, but air inhaled from a suction passage can be inhaled with sufficient vigor.

[0008]

[Embodiment of the Invention] The suction passage which the invention of this invention according to claim 1 is open for free passage to the electric blower's built in main part of vacuum cleaner suction side, and has an opening at the end, While having a flueway which is open for free passage to the exhaust side of said electric blower, respectively and dividing said suction passage and the flueway with the bridgewall, It is the thing provided with the exhaust aperture which makes the exhaust wind discharged from a flueway emit into the atmosphere, and even if it does not use the separate part which blockaded only the flueway, air circulation within the suction tool for vacuum cleaners is not performed, but the air inhaled from a suction passage can be inhaled with sufficient vigor.

[0009] From arranging the exhaust aperture provided in the periphery of the suction tool for vacuum cleaners to the abbreviated upper surface center part of the suction tool for vacuum cleaners, it can be lost that the air which begins to leak from an exhaust aperture sprays a field

to be cleaned up of the invention of this invention according to claim 2, and dust can blow it, and it can prevent *****.

[0010]From arranging the exhaust aperture provided in the periphery of the suction tool for vacuum cleaners in the abbreviated side center section of the suction tool for vacuum cleaners, it is lost that the air which begins to leak from an exhaust aperture sprays a user's face etc. of the invention of this invention according to claim 3, and it can prevent the displeasure of a under [use].

[0011]Since the invention of this invention according to claim 4 provided the hole which makes the bridgewall which divides a flueway and a suction passage open a flueway and a suction passage for free passage, a part of air emitted outside can circulate, the vigor of the air discharged from an exhaust aperture can fall, and it can reduce blowing off around.

[0012]The invention of this invention according to claim 5 in the flueway formed in the suction tool for vacuum cleaners, The exhaust gas pressure of the air discharged by the pressure loss of a filter from an exhaust aperture from having stopped the method filter of a wrap in the exhaust aperture formed in this attachment for cleaning is killed, and exhaust air is prevented from blowing off with sufficient vigor around.

[0013]The invention of this invention according to claim 6 provides the member which has the exhaust aperture formed in the suction tool for vacuum cleaners, enabling free attachment and detachment, and from making said exhaust aperture stop a filter, even if it gets garbage clogged in a filter, it can do filter replacement easily.

[0014]The invention of this invention according to claim 7 is the vacuum cleaner which equipped the main part of a vacuum cleaner which built in the electric blower with the suction tool for vacuum cleaners given in any 1 paragraph of claims 1-6, and an end connection which is open for free passage, The user-friendly vacuum cleaner which suited the air circulation type vacuum cleaner and possesses the attachment for cleaning which is a suction tool for vacuum cleaners which can absorb the garbage of a field to be cleaned up easily can be provided without using a separate part.

[0015]

[Example]Hereafter, the example of this invention is described using a drawing.

[0016](Example 1) Drawing 1 is a side sectional view of the vacuum cleaner of the 1st example of this invention.

Drawing 2 is the elements on larger scale of the vacuum cleaner.

Drawing 3 is the elements on larger scale at the time of making the attachment for cleaning which is a suction tool for vacuum cleaners insert in the vacuum cleaner.

[0017]The cleaner body 10 contains the electric blower 11 which generates a suction force, and the cord reel device 12 is stored by the periphery of the electric blower 11.

[0018]The gripping section 13 is formed in the upper part of the cleaner body 10.

It can move with the cleaner body 10 from supporting this gripping section 13.

[0019]The settling chamber 14 possesses ahead of the cleaner body 10, and the end connection 15 is formed ahead of the settling chamber 14.

This end connection 15 is formed in the double tube constituted by the approximately cylindrical narrow diameter portion 16 and the major diameter 17.

[0020]The dust box 19 in which the settling chamber 14 collects dust for dust, and the air entrance 18 was established and which was formed approximately cylindrical, It comprises the dust filter 20 which prevents invasion of dust, and the inlet pipe 21 which constitutes the passage which absorbs dust is allocated in the periphery side of the dust box 19 formed approximately cylindrical.

This inlet pipe 21 is covered from the parts of the case body 22, and is stopped by the dust box 19, the screw, the nail engagement (not shown), etc.

The flueway part 23 is formed between the periphery of the inlet pipe 21, and the inner surface of the case body 22.

[0021]The air inhaled by operation of the electric blower 11, Pass along the inlet pipe 21 by the inlet port 24 established in the end connection 15 from the narrow diameter portion 16, and dust is collected to the dust box 19, and further the exhaust wind from the electric blower 11, It passes along the electric blower 11 bottom, the flueway part 23 formed by the dust box 19 and the case body 22 is opened for free passage, and air circulates again to the exhaust port 25 between the major diameter 17 of the end connection 15, and the narrow diameter portion 16.

[0022]As for the end connection 15, if the flueway 26 and the suction passage 27 of said end connection 15 are constituted independently, it is needless to say that the same effect is expectable in any shape.

[0023]The bridgewall 29 which divides the flueway 26a and the suction passage 27a into the attachment 28 for cleaning provided enabling free attachment and detachment of the approximately cylindrical attachment 28 for cleaning which is a suction tool for vacuum cleaners which cleans a narrow place etc. is allocated in the end connection 15.

The flueway 26a of the attachment 28 for cleaning is open for free passage to the flueway 26 of the end connection 15, and is opening the suction passage 27a of the attachment 28 for cleaning for free passage to the suction passage 27 of the end connection 15.

[0024]The flueway 26a and the suction passage 27a of the attachment 28 for cleaning are divided so that air may not be open for free passage with the bridgewall 29, and the exhaust aperture 30 which makes the periphery of the attachment 28 for cleaning emit the air from the flueway 26a into the atmosphere is formed.

[0025]In drawing 1 and drawing 2, the exhaust aperture 30 provided in the periphery of the attachment 28 for cleaning is arranged in the abbreviated upper surface center part of the attachment 28 for cleaning.